

REMARKS

Claims 1-12 are now pending in the present application. Claims 1-3 and 6 are drawn to the elected invention identified by the examiner as Group I. Claims 4, 5 and 7-12 are directed to non-elected invention and may be canceled by the examiner upon the allowance of the claims directed to the elected invention.

Claim 1 has been amended by changing the location of the term “comprises 1 to 5000 ppm (as a silicon component) of a silicon-containing compound (E)” for purposes of clarity and to recite “wherein said silicon-containing compound (E) is a silane coupling agent”. The amendment to claim 1 finds basis on page 10, lines 19-21 and on page 11, lines 4-7 of the specification and in claim 2. Claims 1 and 2 have also been amended to recite “and” in appropriate places for purposes of clarification. The amendments to the claims do not introduce any new matter. The amendments were not earlier presented since Heimann and Dolan were cited and applied for the first time in the Final Office Action.

Claim 1 was amended to clarify the silicon-containing compound (E) as an essential component of the adhesion and corrosion resistance imparting agent. Therefore the adhesion and corrosion resistance imparting agent comprises (E) and at least one kind selected from the group consisting of (A) to (D). In addition, claim 1 recites that the silicon-containing compound (E) is a silane coupling agent, one of the Markush members previously recited in claim 2. The differences between the present invention and the references are as follows:

Claims 1-3 and 6 were rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent application Publication 2003/0209290 to Heimann. Also, Claims 1 and 2 were rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,449,414 to Dolan. Claims 3 and 6 were rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,449,414 to Dolan in view of US Patent 3,682,713 to Ries et al.

The cited references fail to render obvious claims 1-3 and 6. According to the present invention, the chemical conversion coating agent contains a silane coupling agent, in other words, a silane coupling agent is used together with a component constituting conversion coats such as zirconium, titanium and/or hafnium in the chemical conversion agent. This is not disclosed or even remotely suggested in the cited references. In the case of treating a surface of

metal with a conventionally known chemical conversion coating agent containing zirconium and the like, sometimes a good chemical conversion coat is not formed on particular metals such as iron, and thereby adequate adhesion between a coating film to be formed by applying the coating to the surface of a chemical conversion coat and the surface of the metal could not be attained. In order to solve the above problems, the chemical conversion coating agent of the present invention contains zirconium, titanium and/or hafnium, fluorine, and an adhesion and corrosion resistance imparting agent, which contains a silane coupling agent as an essential element and at least one kind selected from the group consisting of (A) to (D).

According to the present invention, a concentration of fluorine in the chemical conversion coat is lowered by blending the aforementioned adhesion and corrosion resistance imparting agent, and thereby the problem of adversely affecting the coating film and the surface of metal due to the generation of fluorine during curing of a coating film by heating is resolved. Moreover the coating film strongly adheres to the surface of metal with the silane coupling agent. Therefore, the adhesion to the coating film and the corrosion resistance after coating are significantly improved. In the present invention, as described above, the adhesion and corrosion resistance imparting agent within the chemical conversion coating agent has both a function of lowering a concentration of fluorine and a function of strongly adhering the coating film to the surface of metal.

The above is neither disclosed nor implied in the descriptions of Heimann, Dolan and Ries.

In the description of Heimann, zirconium is merely suggested together with other elements as an optional element, and a silane coupling agent as an essential element is not disclosed. In the description of Dolan and Ries, silane coupling agents are not disclosed.

Therefore the descriptions of Heimann, Dolan and Ries are not suggestive of achieving the present invention.

The mere fact that cited art may be modified in the manner suggested in the Office Action does not make this modification obvious, unless the cited art suggest the desirability of the modification. No such suggestion appears in the cited art in this matter. The Examiner's

attention is kindly directed to *In re Lee* 61 USPQ2d 1430 (Fed. Cir. 2002) *In re Dembiczak et al.* 50 USPQ2d. 1614 (Fed. Cir. 1999), *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984), *In re Laskowski*, 10 USPQ2d. 1397 (Fed. Cir. 1989) and *In re Fritch*, 23, USPQ2d. 1780 (Fed. Cir. 1992).

In Dembiczak et al., *supra*, the Court at 1617 stated: “Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. *See, e.g., C.R. Bard, Inc., v. M3 Sys., Inc.*, 157 F.3d. 1340, 1352, 48 USPQ2d. 1225, 1232 (Fed. Cir. 1998) (describing ‘teaching or suggestion motivation [to combine]’ as in ‘essential evidentiary component of an obviousness holding’), *In re Rouffet*, 149 F. 3d 1350, 1359, 47 USPQ2d. 1453, 1459 (Fed. Cir. 1988) (‘the Board must identify specifically... the reason one of ordinary skill in the art would have been motivated to select the references and combining them’);...”.

Also, the cited art lacks the necessary direction or incentive to those or ordinary skill in the art to render a rejection under 35 U.S.C. 103 sustainable. The cited art fails to provide the degree of predictability of success of achieving the properties attainable by the present invention needed to sustain a rejection under 35 U.S.C. 103. See *Diversitech Corp. v. Century Steps, Inc.*, 7 USPQ2d 1315 (Fed. Cir. 1988), *In re Mercier*, 185 USPQ 774 (CCPA 1975) and *In re Naylor*, 152 USPQ 106 (CCPA 1966).

Moreover, the properties or results of the subject matter and improvements which are disclosed in the specification are to be considered when evaluating the question of obviousness under 35 U.S.C. 103. See *Gillette Co. v. S.C. Johnson & Son, Inc.*, 16 USPQ2d. 1923 (Fed. Cir. 1990), *In re Antonie*, 195, USPQ 6 (CCPA 1977), *In re Estes*, 164 USPQ (CCPA 1970), and *In re Papesch*, 137 USPQ 43 (CCPA 1963).

No property can be ignored in determining patentability and comparing the claimed invention to the cited art. Along these lines, see *In re Papesch*, *supra*, *In re Burt et al.*, 148 USPQ 548 (CCPA 1966), *In re Ward*, 141 USPQ 227 (CCPA 1964, and *In re Cescon*, 177 USPQ 264 (CCPA 1973).

It is requested that the Examiner acknowledge and consider Citation BL from the previously filed Information Disclosure Statement since as stated therein Citation AA is an English language counterpart of Citation BL. Please further note that Citation AA claims priority from Citation BL. For the examiner's convenience, attached are additional copies of the previously filed Information Disclosure Statement, Citation AA and Citation BL.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

In the event that the Examiner believes that another interview would serve to advance the prosecution of this application, the undersigned is available at the number noted below.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 21581-00312-US from which the undersigned is authorized to draw.

Dated:

Respectfully submitted,

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